

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.

Applicant's submission filed on 8/16/11 has been entered.

2. Claims 5-7, 12, 15-17 and 21 have been canceled and claims 1-4, 8-11, 13, 14, 18-20, 42 and 43 are pending

Response to Arguments

3. Applicant's arguments filed 8/16/11 have been fully considered but they are not persuasive. Applicant argues a reason why one would need additional "common codes" for "distinguishing signals" has not been provided; and further argues Hao is based on a different architecture and coding scheme. However, Examiner respectfully disagrees, as common codes are well known in the art and the combination of Martin and Hao is proper since both are analogous art. It has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, the use of common codes CDMA

Art Unit: 2462

systems are well known in the art. Hao teaches using a common pseudo noise (PN) sequence in col. 2, lines 24-29. The purpose for combining Hao with Martin, is to distinguish signals from other users and reduce multipath interference (refer to Hao col. 2, lines 24-29 and col. 3, lines 32-33).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 2, 11, 42 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al. (US 6,324,160) in view of Giallorenzi et al. (US 6,332,008) and Hao et al. (US 7,272,163).

Regarding claims 1, 11, 42 and 43, Martin teaches an apparatus (Fig. 1) for receiving reverse link signals from a subscriber unit comprising: a receiver (antenna 10) that receives a first plurality of reverse link signals (col. 2, lines 55-63), wherein each said reverse link signal of the first plurality of reverse link signals is derived from at least a code and unique orthogonal sequence (Walsh code, col. 3, lines 2-5) and; a timing controller (circuit 22) that determines a timing offset associated with at least one reverse link signal to align a timing of the at least one reverse link signal (col. 3, lines 29-43, 57-64; col. 4, lines 1-2).

Martin fails to explicitly disclose a *plurality* of subscriber units, each said reverse link signal of the second plurality of reverse link signals is derived from a unique pseudo noise (PN) sequence and aligning reverse link signals from other subscriber units.

However, Giallorenzi teaches a *plurality* of subscriber units (Fig. 1A; user 1 to n; col. 5, lines 32-33), each said reverse link signal of the second plurality of reverse link signals is derived from a unique pseudo noise (PN) sequence (Fig. 1A: col. 5, lines 35-38) aligning reverse link signals from other subscriber units (col. 9, lines 33-49 and further described in col. 12, lines 18-48).

In view of this, it would have been obvious to one skilled in the art to modify Martin's system by aligning signals from other subscriber units, so as to enable proper operation of the synchronous communication system.

Martin fails to explicitly teach a common pseudo noise (PN) sequence; however common codes are well known in the art.

Hao teaches using a common pseudo noise (PN) sequence (col. 2, lines 24-25; PN sequence).

Therefore, it would have been obvious to one skilled in the art to include a common code for the purpose of distinguishing signals from other users and reduce multipath interference (Hao: col. 2, lines 24-29; further described in col. 3, lines 32-33).

Regarding claim 2, Martin, Giallorenzi and Hao teach the apparatus and method according to claims 1 and 11 wherein Martin further teaches the timing controller determines a fine timing offset and causes a fine phase adjustment of

Art Unit: 2462

the common pseudo noise (PN) sequence code of the reverse link signal (col. 3, lines 29-43).

6. Claims 3, 4, 8 - 10, 13, 14 and 18 - 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin, Giallorenzi and Hao as applied to claims 1 and 11 above, and further in view of Hadad (US 2007/0076583 A1).

Regarding claims 3, 4, 13 and 14, Martin and Hao teach the apparatus and method according to claims 1 and 11, but fail to explicitly disclose wherein the timing controller provides the gross timing offsets to the subscriber unit in the form of a timing command or report.

However, Hadad teaches wherein the timing controller provides the gross timing offsets to the subscriber unit in the form of a timing command (page 12, paragraph 269).

In view of this, it would have been obvious to one skilled in the art to provide timing offset information to the subscriber in the form of a command or report, for the purpose of correcting its alignment.

Regarding claims 8 and 18, Martin and Hao teach the apparatus and method according to claims 1 and 11 further including a power controller (circuits 35 and 36) that determines a power level of the aligned reverse link signal (col. 4, lines 26-32).

Martin fails to explicitly disclose providing feedback of the power level to the subscriber unit.

Art Unit: 2462

However, Hadad teaches disclose providing feedback of the power level to the subscriber unit (page 13, paragraphs 285).

In view of this, it would have been obvious to one skilled in the art to provide feedback of the power level to the subscriber, in order for the subscriber to transmit at a power level that allows for more efficient processing at the base station.

Regarding claims 9, 10, 19 and 20, Martin and Hao teach the apparatus and method according to claims 8 and 18, but fail to explicitly wherein the power controller provides the power level to the subscriber unit in the form of a power command or report.

However, Hadad teaches wherein the power controller provides the power level to the subscriber unit in the form of a power command (page 13, paragraph 285).

In view of this, it would have been obvious to one skilled in the art to provide the power level to the subscriber in the form of a command or report, for the purpose of notifying the subscriber of an appropriate power level to transmit.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RHONDA MURPHY whose telephone number is (571)272-3185. The examiner can normally be reached on Monday - Friday 9:00 - 5:30pm.

Art Unit: 2462

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Rhonda Murphy/
Examiner, Art Unit 2462